

WHAT IS CLAIMED IS:

1. A stator for a dynamoelectric machine comprising:

an annular stator core in which a large number of slots having grooves lying in an axial direction are formed in a circumferential direction so as to open onto an inner circumferential side; and

a stator winding installed in said stator core, said stator winding being provided with a plurality of winding sub-portions constructed by installing base strands in said slots at intervals of a predetermined number of slots so as to alternately occupy an inner layer and an outer layer in a slot depth direction and welding end portions of said base strands, said base strands being formed by coating an electrically-insulating coating onto a metal wire material, and joint portions between said end portions of said base strands being arranged into at least one row in a circumferential direction,

wherein a first electrically-insulating layer is formed so as to cover each of said joint portions and to bridge a pair of said joint portions that is adjacent in at least one direction selected from a group including a radial direction and a circumferential direction,

a second electrically-insulating layer is formed so as to cover said first electrically-insulating layer and to extend to said electrically-insulating coating of said end portions of said base strands, and

said first electrically-insulating layer has a modulus of elasticity that is larger than a modulus of elasticity of said second electrically-insulating layer.

2. The stator for a dynamoelectric machine according to Claim 1, wherein said second electrically-insulating layer is formed so as to bridge a pair of said joint portions that is adjacent in at least one direction selected from a group including a radial direction and a circumferential direction.

3. The stator for a dynamoelectric machine according to Claim 1, wherein said first electrically-insulating layer is formed so as to cover said joint portions and to extend to said electrically-insulating coating of said end portions of said base strands.

4. The stator for a dynamoelectric machine according to Claim 3, wherein said second electrically-insulating layer is formed so as to bridge a pair of said joint portions that is adjacent in at least one direction selected from a group including a radial direction and a circumferential direction.

5. The stator for a dynamoelectric machine according to Claim 1, wherein said first electrically-insulating layer is made of an epoxy resin.

6. The stator for a dynamoelectric machine according to Claim 1, wherein said second electrically-insulating layer is made of a silicone resin.

7. The stator for a dynamoelectric machine according to Claim 1, wherein said base strands are U-shaped conductor segments,

said plurality of winding sub-portions are constructed by inserting at least one of said conductor segments into each of pairs of slots from a first axial end of said stator core and welding together end portions of said conductor segments projecting outward at a second axial end of said stator core, said slots in each of said pairs of slots being separated by said predetermined number of slots, and

joint portions between said end portions of said conductor segments are arranged into an annular shape in a circumferential direction at said second axial end of said stator core.

8. The stator for a dynamoelectric machine according to Claim 1, wherein said base strands are continuous conductor wires,

said plurality of winding sub-portions are constituted by at least one winding assembly prepared by bending and shaping a predetermined number of strands of said continuous conductor wires,

said winding assembly is constructed by arranging continuous conductor wire pairs equal in number to said predetermined number of slots so as to be offset by a pitch of one slot from each other, said continuous conductor wires being formed into a pattern in which straight portions are linked by return portions and arranged at said predetermined slot pitch and adjacent pairs of said straight portions are offset so as to alternately occupy an inner layer and an outer layer in a slot depth direction by said return portions, said continuous conductor wire pairs each being formed such that two of said continuous conductor wires are arranged so as to be offset by said predetermined slot pitch from each other with said straight portions superposed, and end portions of said continuous conductor wires projecting outward on first and second sides at first and second ends of said winding assembly, and

said plurality of winding sub-portions are constructed by welding together said end portions of said continuous conductor wires constituting said winding assembly installed in said stator core projecting outward from said slots at first and second axial ends of said stator core.

9. The stator for a dynamoelectric machine according to Claim 8, wherein a cap is mounted so as to cover said second electrically-insulating layer formed on said joint portions between said end portions of said continuous conductor wires.